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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/703,174	10/31/2000	Charu C. Aggarwal	YOR920000430US1	7445

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EXAMINER

HILLERY, NATHAN

ART UNIT	PAPER NUMBER
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2176

DATE MAILED: 02/04/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/703,174

Applicant(s)

AGGARWAL ET AL.

Examiner

Nathan Hillery

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to communications: IDS filed on 1/22/01.
2. Claims 1 – 27 are pending in the case. Claims 1, 10, and 19 are independent.

Specification

3. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

4. The abstract of the disclosure is objected to because it refers to purported merits, i.e. the use of the terms "intelligent" and "small percentage". Correction is required.

See MPEP § 608.01(b).

5. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. For example page 5, line 25 and page 9, line 1. Applicant is suggested to add left and right brackets or quotation marks on each side of

hyperlink to deactivate it or Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 5, 14, and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Regarding dependent claims 5, 14, and 23, the term "which are more likely to satisfy the predicate" lacks comparative basis and is therefore rejected. Consequently, the Office will interpret these claims as being substantially similar to claims 6, 15, and 24, respectively, for purposes of this examination.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1 – 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bharat et al. (US006112203A).
11. **Regarding independent claim 1**, Bharat et al. teach that the set of documents can be produced by combining the set of results from a Web search engine in response to a user query (which we call the 'start-set') ...Terms of the query imply a topic of

interest on which the user requested the search to be made. The nodes in the start set are first scored according to their connectivity, and the number of terms of the query that appear as unique sub-strings in the URL of the represented documents ... During a content analysis phase, a relevance weight is assigned to a carefully chosen subset of the nodes in the graph ... The relevance weights are based on the similarity of each represented document to the distilled topic as determined above. The relevance weight of a document is further increased when the document includes words that are terms of the query (Column 3, lines 3 – 27), which provide for **retrieving one or more documents from the information network that satisfy a user-defined predicate and collecting statistical information about the one or more retrieved documents as the one or more retrieved documents are analyzed**. Bharat et al. do not explicitly teach **using the collected statistical information** ... However, it would have been obvious to one of ordinary skill in the art at the time of the invention to **use the collected statistical information to automatically determine further document retrieval operations**, based on Bharat et al. teaching that we *"prune" the graph so that only pages that specifically relate to the topic implied by the query are represented in the graph. Finally, the connectivity of the pruned graph is scored to determine the ranking of the pages in the result set. Only pages whose content and connectivity ranking exceeds a predetermined threshold are returned to the user* (Column 4, lines 38 – 44). The skilled artisan would be motivated to **use the collected statistical information** based on this teaching because *the invention relates generally to computerized information retrieval and more particularly to ranking retrieved documents*

based on content (Column 1, lines 7 – 9) and because a good ranking process will return “useful” pages (Column 4, lines 20 – 21).

12. **Regarding dependent claim 2**, Bharat et al. teach that *in response to a query composed by a user, the search engine returns a result set which satisfies the terms (key words) of the query (Column 4, lines 11 – 14), which provides that the user-defined predicate specifies content associated with a document.*

13. **Regarding dependent claims 3 and 4**, Bharat et al. teach that *during a content analysis phase, a relevance weight is assigned to a carefully chosen subset of the nodes in the graph. The relevance weights are based on the similarity of each represented document to the distilled topic as determined above. The relevance weight of a document is further increased when the document includes words that are terms of the query (Column 3, lines 21 – 27), which provide that the statistical information collection step uses content of the one or more retrieved documents and that the statistical information collection step considers whether the user-defined predicate has been satisfied by the one or more retrieved documents.*

14. **Regarding dependent claims 5 and 6**, Bharat et al. teach that *in step 260, we assign a similarity weight to each node 213 of the sub-graph 255. Various document similarity measuring techniques have been developed in Information Retrieval to determine the goodness of fit between a “target” document and a collection of documents. These techniques typically measure a similarity score based on word frequencies in the collection and a target document (Column 6, lines 51 – 57), which provide that the collected statistical information is used to direct further document*

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retrieval operations toward documents which are similar to the one or more retrieved documents that also satisfy the predicate.

15. **Regarding dependent claim 7**, Bharat et al. teach that *in one prior art technique, an algorithm for connectivity analysis of a neighborhood graph (n-graph) is described by Kleinberg ... The algorithm analyzes the link structure, or connectivity of Web pages "in the vicinity" of the result set to suggest useful pages in the context of the search that was performed (Column 1, lines 55 – 64), which provide the capability that the collected statistical information is used to direct further document retrieval operations toward documents which are linked to by other documents which also satisfy the predicate.*

16. **Regarding dependent claim 8**, Bharat et al. teach that *FIG. 1 shows a distributed network of computers 100 that can use our invention. Client computers 110 and server computers 120 (hosts) are connected to each other by a network 130, for example, the Internet. The network 130 includes an application level interface called the World Wide Web (the "Web") (Column 3, lines 59 – 64) and that although the invention is described with respect to documents that are Web pages, it should be understood that the invention can also be worked with any linked data objects of a database whose content and connectivity can be characterized (Column 4, lines 4 – 8), which provide for the information network is the World Wide Web and a document is a web page.*

17. **Regarding dependent claim 9**, Bharat et al. teach that *in our present invention, we use only a subset of the pages for the purpose of content analysis. The subset of influential pages is selected by a heuristic that is based on the URLs of the pages in the*

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*start set 201 and their connectivity. This information can be determined from the graph 211 without having to fetch the pages themselves. The heuristic selects nodes based on "in-degree," i.e., the number of edges 213 pointing at a node, "out-degree" (out-going edges) and comparison of the key words in the query with unique sub-strings of the URL (Column 5, lines 47 - 56), which provides that **the statistical information collection step uses one or more uniform resource locator tokens in the one or more retrieved web pages.***

18. **Regarding independent claim 10**, the claim incorporates substantially similar subject matter as claim 1, and is rejected along the same rationale.

19. **Regarding dependent claim 11**, the claim incorporates substantially similar subject matter as claim 2, and is rejected along the same rationale.

20. **Regarding dependent claim 12**, the claim incorporates substantially similar subject matter as claim 3, and is rejected along the same rationale.

21. **Regarding dependent claim 13**, the claim incorporates substantially similar subject matter as claim 4, and is rejected along the same rationale.

22. **Regarding dependent claims 14 and 15**, the claims incorporate substantially similar subject matter as claim 6, and are rejected along the same rationale.

23. **Regarding dependent claim 16**, the claim incorporates substantially similar subject matter as claim 7, and is rejected along the same rationale.

24. **Regarding dependent claim 17**, the claim incorporates substantially similar subject matter as claim 8, and is rejected along the same rationale.


25. **Regarding dependent claim 18**, the claim incorporates substantially similar subject matter as claim 9, and is rejected along the same rationale.
26. **Regarding independent claim 19**, the claim incorporates substantially similar subject matter as claim 1, and is rejected along the same rationale.
27. **Regarding dependent claim 20**, the claim incorporates substantially similar subject matter as claim 2, and is rejected along the same rationale.
28. **Regarding dependent claim 21**, the claim incorporates substantially similar subject matter as claim 3, and is rejected along the same rationale.
29. **Regarding dependent claim 22**, the claim incorporates substantially similar subject matter as claim 4, and is rejected along the same rationale.
30. **Regarding dependent claims 23 and 24**, the claims incorporate substantially similar subject matter as claim 6, and are rejected along the same rationale.
31. **Regarding dependent claim 25**, the claim incorporates substantially similar subject matter as claim 7, and is rejected along the same rationale.
32. **Regarding dependent claim 26**, the claim incorporates substantially similar subject matter as claim 8, and is rejected along the same rationale.
33. **Regarding dependent claim 27**, the claim incorporates substantially similar subject matter as claim 9, and is rejected along the same rationale.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Hillery whose telephone number is (703) 305-4502. The examiner can normally be reached on M - F, 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on (703) 305-9792. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


JOSEPH H. FEILD
PRIMARY EXAMINER

NH